

REMARKS

This Amendment is in response to the non-final Official Action currently outstanding with respect to the above-identified application.

At the time of the issuance of the currently outstanding Official Action, Claims 1-23 stood canceled, without prejudice, and Claims 24-35 were pending. By the foregoing Amendment, Claim 24 has been amended. No claims have been canceled, and no claims have been added. Accordingly, upon the entry of the foregoing Amendment, Claims 24-35 as amended will constitute the claim under active prosecution in this application.

The claims as they will stand upon the entry of the foregoing Amendment are reproduced above as required by the Rules.

In the currently outstanding Official Action, the Examiner has:

1. Acknowledged Applicants' claim for foreign priority under 35 USC 119(a)-(d) or (f), and indicated that the required copies of the priority documents have been received by the United States Patent and Trademark Office;
2. Indicated his acceptance of the drawings filed on 28 November 2003;
3. Acknowledged Applicants' Information Disclosure Statement of 24 February 2004 by provide Applicants with a copy of the Form PTO-1449 that accompanied that Statement duly signed, dated and initialed by the Examiner to confirm his consideration of the art listed therein;

4. Notified Applicants of the entry of their Request for Continued Examination;
5. Objected to the drawings on the basis that they fail to show every element specified in the claims;
6. Objected to Claim 24 on the basis that the period that appears after the word lines at line 10 thereof should be changed such that the claim reads "lines; wherein" to improve the form of the claim; and
7. Rejected Claims 24-35 under 35 USC 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most closely concerned, to make and/or use the invention.

At the outset, it should again be emphasized that Claim 24 can perform a Pseudo-Impulse drive method (i.e., the first display mode in claim 24) and a conventional drive method (i.e., the second display mode in Claim 24). The first display mode has advantages in displaying a motion picture, and the second display mode has advantages in displaying a still picture.

Further, it should be recalled that the cited references "Verhulst" and "Verhulst II" (WO 97/31362) relate to a display using a liquid crystal material that has a spontaneous polarization. The technology described in "Verhulst" and "Verhulst II" is directed to solving a problem that is unique to an LCD that uses a liquid crystal material having a spontaneous polarization, and is completely unrelated to an impulse drive. Accordingly, Applicant respectfully submits that a person of ordinary skill in the art would not have been motivated to arrive at the present invention which requires the second display mode. This is because the second display mode caused the problems solved by the inventions described in "Verhulst" and "Verhulst II".

Further comment with respect to items 1-4 above is not deemed to be necessary in these Remarks.

With respect to item 5, The Examiner has objected to the current drawing as failing to show all of the elements claimed. Specifically, the Examiner has asserted that the feature “scan start signal supply means for...supply period” recited at claim 29, lines 9-15, and “the supply control means outputs a control signal for setting the latch circuit number “m” to...external” recited in claim 31, lines 5-8, are not shown in the drawings. The Examiner requires that these features be shown in the drawings or canceled from the claims.

In response to the Examiner’s objections to the drawings, Applicants respectfully submit that the features of the claims questioned by the Examiner already appear in the drawings either specifically or inherently for the reasons previously presented in detail. Nevertheless, in the interest of advancing this prosecution, Applicants now have proposed changes to Figure 4 that are believed to remove the bases of the Examiner’s objections completely and unambiguously. Specifically, Applicants propose that the designation “Shift Register” be moved out of the box in which it is presently contained and a lead line be added extending therefrom to the interior of the box. Further, Applicants propose the extension of the line extending to the right from the box “AS” and the addition of two arrow headed lines extending therefrom to the top of the box presently designated as “Shift Register” opposite the lines designated “G₁₅₉” and “G₁₆₀”. In addition, Applicants propose the addition of five additional dotted line boxes within the box previously designated as “Shift Register”, the first added box being separated from the other two by “...”, and that the first added box be labeled “m” and the box immediately after the “...” being labeled “k”. The proposed changes to Fig. 4 just described are shown in red on the attached photocopy of Figure 4 and are supported by the present specification at least at page 56, line 6 to page 61, line 5.

More particularly, Applicants respectfully call the Examiner's attention to the fact that the portion of the specification alluded to above clearly indicates that in an embodiment of the invention the "scan start signal supplying means for supplying the scan start signal to the first latch circuit of the shift register during a data signal supply period" is the line designated as "scan start signal" in Fig. 4 which will be seen from Fig.1 is connected to the display control section 20.

The remaining portion of Claim 29 (i.e., "also supplying the scan start signal to continuous k latch circuits starting from the mth latch circuit of the shift register during a black display signal supply period") constitutes the arrow headed line from the line designated "Scan Start Signal" to the box designated "AS" in conjunction with the line extending from the box designated AS with its arrow headed branches indicative of inputs to the individual latch circuits which now include additional dotted line boxes within the box presently designated as "Shift Register".

As mentioned, a full description of the operation of these components in the manner claimed is set forth in conjunction with the description of the second embodiment in the specification and need not be repeated here.

With respect to item 6, the Examiner objects to the period after the word "lines" at line 10 of Claim 24. By the foregoing Amendment, Applicants have deleted the period and substituted a comma and the word --wherein-- therefor as suggested by the Examiner. Further, Applicants have changed the word "comprising" to --comprises-- at the end of the clause referred to by the Examiner to improve its English language phraseology. Applicants respectfully submit that these Amendments remove the bases for the Examiner's Claim Objections. Consequently, a decision withdrawing the outstanding Claim Objections in response to this communication is respectfully requested.

Finally, with respect to item 7, the Examiner has rejected Claims 24-35 under 35 USC §112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and./or use the invention. After a thorough review of the specification and the current claim wording, Applicants believe that the Examiner is in error on these points and respectfully **traverses his rejections under 35 USC 112, first paragraph**. In support of this traversal Applicant respectfully calls the Examiner's attention to the following portions of the specification and their significance:

- 1) The selector switch as currently claimed in Claim 24 when in operation alternately selects between a data signal display signal and a black signal display signal. The display control has a first mode when the selector switch is in operation and a second mode when the selector switch is not in operation. The Examiner suggests that the second mode is not adequately disclosed. However, Applicants respectfully note that at page 48 of the present specification a switch for selecting between the image display sequence of the present invention and a conventional image display sequence is specifically disclosed. Further, the description of the conventional image display sequence preceding that specific disclosure of a selector switch does not include the selector switch of the present invention nor does it include the black signal supply operation associated therewith in the claim. Accordingly, Applicants respectfully submit that the Examiner's rejection in this regard is misplaced and should be withdrawn since sufficient enabling support for the two display modes and their alternative selectability by the selector switch is definitely present in the specification.

- 2) The Examiner asserts that the voltage of the signal-use power supply being changeable between the first display mode and the second display mode as set forth in Claim 32 is not adequately disclosed in the specification. Applicants respectfully disagree. In particular, Applicants respectfully note that this feature of the claims is clearly disclosed and enabled by the first full paragraph of page 49 of the present specification. More specifically, it is clear from this portion of the specification that as between the image display sequence of the present invention and that of a conventional image display sequence, the signal-use power supply requires adjustment such that the write voltages for various gray scale levels will be appropriate. Applicants respectfully submit that this is a sufficient disclosure to enable one skilled in the art to make the required adjustments. Hence, Applicants also respectfully submit that this rejection also is misplaced and should be withdrawn in response to this communication.
- 3) The changeability of the black display signal power supply is specifically disclosed at page 62 of the specification in connection with the compensation for environmental temperature. Applicants respectfully submit that this teaching is clearly supportive of and enabling with respect to the limitations of Claim 35. Hence, Applicants again respectfully submit that the Examiner's rejection is misplaced and should be withdrawn in response to this communication.

In view of the foregoing Amendment and Remarks, Applicants respectfully submit that all of the currently pending claims of this application are now in condition for immediate allowance. Accordingly, the early reconsideration and withdrawal of the currently outstanding rejections in response to this communication and the new formal drawings submitted concurrently herewith are earnestly and respectfully solicited.

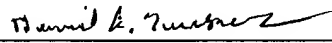
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Applicants believe that additional fees are not required in connection with the consideration of this response to the currently outstanding Official Action. However, if for any reason a fee is required, a fee paid is inadequate or credit is owed for any excess fee paid, you are hereby authorized and requested to charge and/or credit Deposit Account No. **04-1105**, as necessary, for the correct payment of all fees which may be due in connection with the filing and consideration of this communication.

Respectfully submitted,

Date: June 14, 2004

By:



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DGC/DAT

49924 (46547)



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/595,363

06/15/2000

Koichi Miyachi

49924(820)

9295

21874

7590

03/18/2004

EDWARDS & ANGELL, LLP

P.O. BOX 55874

BOSTON, MA 02205

EXAMINER

NGUYEN, JIMMY H

ART UNIT

PAPER NUMBER

2673

DATE MAILED: 03/18/2004

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MAR 22 2004

EDWARDS & ANGELL, LLP
IP DOCKETING DEPT. (BOS)

NOTED ON SYSTEM

Please find below and/or attached an Office communication concerning this application or proceeding.

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JUN 21 2004

Technology Center 2600





Office Action Summary

Application No

09/595,363

COPY

Applicant(s)

MIYACHI, KOICHI

Examiner

Jimmy H. Nguyen

Art Unit

2673

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 24-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 24-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

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Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

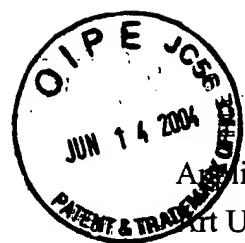
Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 15.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.



Application/Control Number: 09/595,363
Art Unit: 2673

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DETAILED ACTION

Request for Continued Examination

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1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 02/24/2004 has been entered. Claims 24-35 are currently pending in the application. An action on the RCE follows:

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the features, "scan start signal supplying means for ... supply period" recited in claim 29, lines 9-15, and "the supply control means outputs a control signal for setting the latch circuit number "m" to ... external" recited in claim 31, lines 5-8, must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Objections

3. Claim 24 is objected to because of the following informalities: line 10, "lines." Should be changed to -- lines; wherein--, so as to improve its form to conform with U.S. claim drafting practice. Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 24-35 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Regarding to claims above, the disclosure, when filed, does not contain sufficient information regarding to the claimed feature, “in the first display mode, the selector switch is in operation, and in the second display mode, the selector switch is not in operation”, as recited in independent claim 24, lines 28-29 and lines 38-39. The disclosure, specifically the original claim 19, only discloses as much as recited in claim 24. Further, the disclosure, specifically fig. 2 and the description, page 32, last line, through page 33, line 7, only discloses the selector switch (34) being in operation, in response to the switching clock signal from the display control section (20). However, the disclosure, when filed, does teach expressly that how the selector switch is placed in the second display mode, and when the selector is in the second display mode, what the output of the selector switch (34) is (i.e., what state the output of the selector switch 34 is), what the signal is used to drive the source line (S) and how the image is displayed on the LC panel. Accordingly, the disclosure, when filed, does not contain sufficient information regarding to the above underlined feature, so as to enable one skilled in the pertinent art to make and/or use the claimed invention.

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Additionally to claims 32 and 35, the disclosure, when filed, does not contain sufficient information regarding to the claimed features, “the voltage of the signal-use reference power supply is **changeable** between the first display mode and the second display mode”, as recited in claim 32, last 3 lines, and “the voltage of the black display signal use power supply is **changeable**”, as recited in claim 35, last 2 lines. The disclosure, specifically the original claims 20 and 23, only discloses as much as recited in claims 32 and 35. Further, the disclosure, specifically the description, page 32, lines 7-17, and page 33, line 17, through page 34, line 4, discloses that, in the first display mode, during a time period, the data signal, based on the image data and a signal-use reference voltage derived from the signal-use reference power supply (22), is outputted to the source line in the first half of the time period, and the reset signal, based on the black signal data derived from the black signal power supply (24), is outputted to the source line in the second half of the time period. However, the disclosure, when filed, does teach expressly the above underlined feature, so as to enable one skilled in the pertinent art to make and/or use the claimed invention.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jimmy H. Nguyen whose telephone number is (703) 306-5422. The examiner can normally be reached on Monday - Thursday, 8:00 a.m. - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached at (703) 305-4938.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

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Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive,
Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding
should be directed to the Technology Center 2600 Customer Service Office whose telephone
number is (703) 306-0377.

JHN
March 16, 2004



Jimmy H. Nguyen
Examiner
Art Unit: 2673



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FORM PTO-1449 INFORMATION DISCLOSURE STATEMENT	DOCKET NO: 49924-RCE (46547)	SERIAL NO.: 09/595,363
	APPLICANT(S): K. Miyachi	
	FILING DATE: June 15, 2000	GROUP NO.: 2673

UNITED STATES PATENT DOCUMENTS

EXAM. INITIALS		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
JHN	AA	6,473,077 B1	10/29/2002	A. Takenaka, et al.	345	209	09/15/1999
	AB						
	AC						
	AD						
	AE						
	AF						
	AG						
	AH						
	AI						

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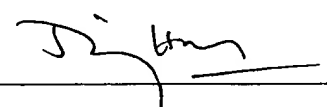
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FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES/NO
JHN	BA	04-309995	11/02/1992	JAPAN	—	—	Abstract
JHN	BB	07-140933	06/02/1995	JAPAN	—	—	Abstract
	BC						
	BD						
	BE						
	BF						

OTHER DOCUMENTS (INCLUDING AUTHOR, TITLE, DATE, PERTINENT PAGES, ETC.)

CA	
EXAMINER: 	DATE: 03/09/04